

II. Remarks

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-51 are pending in the application. Claims 1, 17, and 19-27 are independent.

Applicants respectfully submit that no new issues are raised by the above amendments since they (i) incorporate allowable subject matter into independent claims, and (ii) merely clarify previously presented and argued features.

Claims 1-40 and 42-51 were rejected as being unpatentable over Kenyon '562 and Ishihara, for the reasons discussed on pages 2-14 of the Office Action. Applicants respectfully traverse all art rejections. The Examiner kindly indicated that Claim 41 contains allowable subject matter. Therefore, while specifically traversing the art rejections, and preserving Applicants' right to file a continuation application to pursue the broad but patentable claims, Applicants have incorporated subject matter from the allowable dependent claim 41 into independent Claims 1, 20, 23, and 27 solely to secure immediate allowance thereof.

Each of the independent Claims 17, 21, and 24 recites a novel combination of structure and/or steps whereby a **video** stream is input which corresponds to a video screen having a plurality of regions, the video screen comprising a plurality of pixels having intensity and/or color. First,

the pixel values of at least one of the intensity and the color of the video signals corresponding to each of the plural areas of the video screen are summed. Next, a set of low rate time series feature waveforms are formed from the pixels summed over each of the plural areas of the video screen. Thereafter, overlapping time intervals of the multiple feature waveforms are formed such that the overlapping time intervals encompass the entire received video frame sequence. The most distinctive information from each time interval is obtained, and the features of the time interval segments are rank-order according to their information content. The rank-ordered features of each of the time interval segments are transformed to produce complex spectra. Finally, the transformed complex spectra are stored as video features.

While Kenyon '562 discloses that "the present invention may be utilized with radio, television, data transfer and other broadcast systems" (Col. 6, lines 52-54), the word "video" does not appear, and there is no disclosure regarding (i) the summing of the intensity and/or color of video signals, or (ii) the forming of low rate time series data streams from the summed video signals. The Office Action states that Ishihara discloses such features. Quite simply, none of Kenyon and Ishihara discloses or suggests

(either individually or in combination) summing the pixel values of at least one of the intensity and the color of the video signals corresponding to each of the plural areas of the video screen, and then forming a set of low rate time series feature waveforms from the pixels summed over each of the plural areas of the video screen. Likewise, none of Kenyon and Ishihara discloses or suggests (either individually or in combination) forming overlapping time intervals of the multiple feature waveforms such that the overlapping time intervals encompass the entire received video frame sequence. Finally, none of Kenyon and Ishihara discloses or suggests (either individually or in combination) rank-ordering features of each of the time interval segments according to their information content, transforming the features to complex spectra, and then storing the complex spectra.

Moreover, Applicants respectfully submit that no convincing rationale has been shown on the record which would motivate the person of ordinary skill in the art to combine Kenyon with Ishihara in the manner proposed. The Office Action only recites such motivation as "providing the system with increases flexibility." Respectfully, such "motivation" is overbroad and would allow the Examiner to combine Ishihara with any reference to produce all possible combinations. The law is not so broad. It is well established that, in order to sustain

a rejection under 35 USC §103, it is the burden of the USPTO to establish a *prima facie* case of obviousness, *In re Reuter*, 651 F.2d 751, 210 USPQ. 249 (CCPA 1981). In asserting such a case of obviousness, the Examiner must propose some modification of a particular reference or a combination thereof with another reference in order to arrive at the claimed invention. In this regard, the teachings of a single prior art reference or a primary prior art reference (which is combined with one or more secondary prior art references) must be sufficient to justify a conclusion that any proposed modification or combination of references is what one of ordinary skill in the art would have found obvious to do at the time the invention was made, *In re Linter*, 458 F.2d 1013, 173 USPQ 560, 562 (CCPA 1972). Importantly, the Courts have consistently held that there must be some logical reason apparent from the evidence of record that would justify a modification or combination of prior art references, *In re Regel*, 188 USPQ 132 (CCPA 1975). If there is no such reason, the *prima facie* case of obviousness has not been made out, *Oscar Mayer Foods Corp. v. Sara Lee Corp.*, 15 U.S.P.Q. (2d) 1204, (D.C. Wis., 1990).

It is respectfully submitted that, absent hindsight reconstruction, the person of ordinary skill in this art would never think to combine Ishihara with Kenyon. Hindsight combination of references is not a valid basis for rejection under 35 USC §103, *In re Adams*, 148 U.S.P.Q. 742 (CCPA 1966) and *In re Skoll*, 187 USPQ 481, 484 (CCPA 1975). Further, in

Twin Disc Inc. v. United States, 10 Cl. Ct. 713; 231 U.S.P.Q. 417, 425 (Cl. Ct. 1986), the Court stated:

... it is now clear beyond cavil that it is not permissible to ascertain factually what the inventors did and then view the prior art in such a manner as to select from the random facts of that art only those which may be modified and then utilized to reconstruct the claimed invention.

Citing *Orthopedic Equipment Co., Inc. v. United States*, 702 F.2d 1005, 1012; 217 USPQ 193, 199 (Fed. Cir. 1983), the Court in *Twin Disc* further stated that it is incorrect to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.

Accordingly, Applicants respectfully submit that Claims 17, 21, and 24 are fully patentable over the cited art.

Each of the independent Claims 19, 22, and 25 recites a novel combination of structure and/or function including forming overlapping time intervals of the multiple feature streams (e.g., see the embodiment depicted in Fig. 10) such that the overlapping time intervals used to construct templates encompass the *entire* received stored audio stream. In Kenyon '562, no overlapping time intervals of the multiple feature streams are formed in the construction of templates. Instead the single audio waveform used for correlation is zero-filled to double its length. Also, Kenyon '562 only stores reference patterns for a small

portion of the audio work, not the entire audio stream. This requires that the unknown input stream is monitored continuously using overlapping intervals. Thus, the salient claimed features are neither disclosed nor suggested by the cited art.

Independent Claim 26 recites a novel combination of structure and/or function whereby a plurality of feature time series waveforms, which respectively correspond to distinct portions of the received input data stream, are formed. Multiple feature streams are formed from the plurality of feature time series waveforms, and overlapping time intervals of the multiple feature streams are then formed. The distinctiveness of each feature in each time interval is estimated, and the features are rank-ordered according to their information content. The feature time series waveforms are then transformed to obtain complex spectra, and the feature complex spectra are stored as the recognition features. In contrast, Kenyon '562 does not form any overlapping time intervals of multiple feature streams. Also, Kenyon '562 forms correlation feature streams from a single time series waveform, not a plurality of time series waveforms. Again, the salient claimed features are neither disclosed nor suggested by the cited art.

In view of the above amendments and remarks, it is believed that this application is now in condition for allowance, and a Notice thereof is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3500. All correspondence should continue to be directed to our address given below.

Respectfully submitted,


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